

# Warblings From the Atlas

March 2006

Issue 1

## Two Atlas Years Left—Read All About It!



Welcome to your Michigan Breeding Bird Atlas II newsletter. We hope you'll spend some time looking at the information we've assembled. You'll learn about what we're planning for 2006 and 2007, our last two field seasons, including our emphasis on priority and specialty blocks and on completing point counts.

We'll also be conducting surveys in riparian and grassland areas. Many of the riparian surveys will require travel by canoe, so plan your canoe trips to include bird surveys. More information about protocols is included in this newsletter.

The status of Atlas funding and continuing financial needs are discussed. Support has been great, but this is a huge project, so we continue to apply for grants and request donations. There are opportunities to buy or earn Atlas souvenirs. And we'll tell you about some of the common pitfalls in observing and reporting and

about how to avoid them.



We are entering the busiest time for this multi-year project and encourage you to plan your surveys for the 2006 and 2007 seasons to cover as many priority blocks as you can. While we welcome data from anywhere in the state, Atlas protocol requires us to have coverage of the randomly selected priority blocks. So settle down by the window overlooking your feeders, help yourself to a cup of coffee or hot chocolate, and start planning your spring and summer birding.

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## Atlas Funding

Costs for the original Atlas project, about 20 years ago, exceeded \$500,000. It is anticipated that total costs for MBBA II, including fieldwork and publication of the second edition, will exceed \$800,000.

Major Atlas sponsors are Michigan DNR (\$50,000/year for 7 years), The Herbert H. and Grace A. Dow Foundation (\$75,000), and Arcus Gay & Lesbian Fund (\$50,000/year for 3 years). Additional sponsors (\$5,000/year) include Michigan Audubon Society, US Fish & Wildlife Service, University of Michigan-Dearborn's

Rouge River Observatory, and Kalamazoo Nature Center.

Other supporters at \$1,000 or more are Kalamazoo Community Foundation, Four Township Water Resources Council (both supporting specific projects in Kalamazoo and Barry counties), and the Copper Country Audubon Society. A number of individuals and organizations have provided support in amounts ranging from five to several hundred dollars.

To support increased effort for the last two Atlas field seasons, we have recently

submitted grant applications to an array of local funders in the Saginaw Bay and western Michigan areas. We have requested funds from The Midland Area Community Foundation, Saginaw Bay Watershed Initiative Network, Bay Area Community Foundation, The Frey Foundation, The Wege Foundation, and The Capital Region Community Foundation.

Individual donations also are important, both to provide additional funds and to demonstrate support for the Atlas. See page 5 for more details.



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### Coming Next Issue—

**Patuxent On-line Data Entry!**

## Priorities for 2006 Breeding Season

During the two remaining Atlas field seasons, we have much to accomplish. We must complete coverage of priority blocks, identify and survey critical specialty blocks, greatly increase point count coverage in priority blocks, assure adequate coverage of critical habitat types, and focus on species inadequately represented in surveys to date. The Michigan Natural Features Inventory (MNFI) will continue to survey woodland owls, grassland birds, nighthawks, and whip-poor-wills and will do limited work on wetlands. To complement this, our plans for 2006 include a major effort to survey wetlands, especially riparian areas. These areas frequently support higher species totals and more individuals than other habitat types and are essential for preserving Michigan's avifaunal diversity.

### Priority and Specialty Blocks

In each geographical township in the state, a randomly selected ¼-township has been designated as the priority block. Approximately half of these priority blocks have received at least some coverage so far. With just two seasons left, we need people to expand their efforts to include as many of the remaining priority blocks in their areas as feasible. Areas with particularly low coverage include the Saginaw Bay area, northcentral Lower Peninsula, much of southeastern Michigan, and the western UP. Contact your regional coordinator to learn about coverage needs near you. See the map on page 9 for an overview of coverage needs.

There are numerous non-priority blocks with high diversity, rare, threatened or endangered species, or unique habitats. These blocks are important to the conservation of Michigan's breeding birds. We need to know which species use them and in what numbers. Because of the nature of these areas, they have strong potential for being included among Michigan's Important Bird Areas. MBBA II data will provide documentation for that effort.

If you are willing to survey priority or specialty blocks with little or no coverage to date, please contact us or your regional

coordinator for lists and maps.

### Point Counts

With two years of fieldwork remaining, it's important that we make a significant effort to complete point counts in priority blocks. Having a clear picture of the statewide abundance of Michigan's birds should give us a clearer picture of where conservation efforts need to be focused for various species. We hope these data will strengthen the case for government officials, land owners, land managers and other decision-makers locally and throughout Michigan to take appropriate actions to protect and maintain healthy, sustainable breeding bird populations. The future of management for bird conservation will depend heavily on the abundance data gathered for MBBA II.

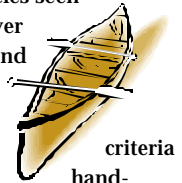
Anyone capable of identifying most breeding birds in their area can participate. Ultimately, we need to distribute point counts fairly evenly throughout the state. Five-minute point counts divided into three- and two-minute intervals will be used, with all species seen or heard recorded at distances of 50 meters, 100 meters, and unlimited distance. Counts will be conducted between sunrise and 10:30 am. Please request block assignments and detailed instructions from the Atlas office.

### Target Habitats

There are about 120 rivers and streams (36,350 river miles) in Michigan's 62 major watersheds. We plan to survey 25 to 30 major riparian systems in 2006. We also plan to conduct point counts in at least 10 watersheds to provide abundance data for riparian systems for use in determining geographical variation in abundance, habitat selection, species composition, and fragmentation effects. The riparian bird data will be useful for confirmation of Important Bird Area sites associated with rivers. Several riparian species are included in the US Fish & Wildlife Resource Conservation Priorities for Region 3. Among these are American Bittern, Least Bittern, Black-crowned Night-Heron, Red-

shouldered Hawk, Acadian Flycatcher, Sedge Wren, Wood Thrush, Cerulean Warbler, Prothonotary Warbler, and Louisiana Waterthrush.

Canoe transects along rivers will be scheduled. Avian species seen or heard along each river stretch will be tallied and classified as possible, probable or confirmed breeders, based on criteria outlined in the Atlas handbook. Some volunteers will be asked to conduct point counts on rivers, following standard Atlas point count protocol.



In cooperation with MNFI, grassland birds also will receive close attention in 2006, continuing the project begun in 2005. If you have larger grasslands (80 acres or more) within your survey blocks, make sure to include these areas. Of course, you should always avoid trespassing. If your area includes a particularly large or diverse grassland area, please notify the office so we can determine if these grasslands should be included in the MNFI point count project. If you wish to participate directly in the MNFI survey protocol, contact us as soon as possible. See page 8 for MNFI contact details.

### Target Species

During the last two field seasons, we will focus on documenting nesting occurrences, habitats and status of priority species within the state. These include Michigan rare, threatened, endangered and special concern bird species, US Fish & Wildlife Service focal species, USFWS priority species for Region 3, and Partners in Flight species of continental importance. A number of birds are included in several of these lists.

Among the Michigan rare, threatened, endangered and special concern species are King Rail, Yellow Rail, Short-eared Owl, Long-eared Owl, Yellow-throated Warbler, Caspian Tern, Common Loon, Loggerhead Shrike, and Kirtland's, Golden-winged, and Cerulean War-

## 2006 Priorities, cont.

blers. For a complete list, see [web4.msue.msu.edu/mnfi/data/specialanimals.cfm](http://web4.msue.msu.edu/mnfi/data/specialanimals.cfm).

We will also give priority to surveying Michigan species outlined in Partners in Flight's "North American Landbird Conservation Plan" (2004). Among these are Sedge Wren, LeConte's Sparrow, Henslow's Sparrow, and Bobolink in grasslands; Yellow Rail in wetlands; Golden-winged and Connecticut Warblers in shrub-scrub; Veery, Rose-breasted Grosbeak, Black-billed Cuckoo, and Red-headed Woodpecker in deciduous forests and savannahs; and Canada Warbler in deciduous and mixed forests.

Within the Partners in Flight's North American Landbird Conservation Plan, a number of the Species of Continental Importance listed occur in Michigan. These species are classified by biome (Northern Forest and Prairie Avifaunal) and by whether they require immediate action, management, or long-term planning and responsibility. Breeding species include Kirtland's and Chestnut-sided Warblers, Rusty Blackbird, and Wood Thrush in the forest biome and Henslow's Sparrow, Golden-winged Warbler, Red-headed Woodpecker, and Short-eared Owl in the prairie biome.

There is clearly a great deal of work to be done in the remaining two years. Fortunately, there's something for everyone, whether you are interested in a particular species, a habitat type or simply enjoy being outdoors. In order to coordinate our work effectively, it is extremely important that we know which areas are being surveyed, so please keep in close touch with your regional coordinator for block assignments and with our office for statewide efforts. Also, although we welcome data from anywhere in the state, we particularly need you to survey in priority and specialty blocks during these last two years.

## Regional Coordinators

*If you are interested in filling one of the empty Coordinator volunteer positions, please contact Ray at (269) 381-9738, ext. 20 or [miatlas@naturecenter.org](mailto:miatlas@naturecenter.org). Thank you.*

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SPECIES	DATE	#SEEN	OB	PO	PR	CO
Common Loon * T						
Pied-billed Grebe						
Red-necked Grebe * DO						
Eared Grebe * DO						
American White Pelican * DO						
Double-crested Cormorant						
American Bittern * SC						
Least Bittern * T						
Great Blue Heron	5-3	1		#		
Great Egret						
Snowy Egret * DO						
Little Blue Heron * DO						
Tricolored Heron * DO						
Cattle Egret *						
Green Heron	6-15	1		#		
Black-crowned Night-Heron * SC						
Yellow-crowned Night-Heron * DO						
Turkey Vulture	6-15	1		#		
Canada Goose	6-15	1				F
Mute Swan						
Trumpeter Swan * T						
Wood Duck	5-3	2			P	
Gadwall						
American Wigeon						
American Black Duck						
Mallard	6-1	1				F
Blue-winged Teal						
Northern Shoveler						
Northern Pintail						
Green-winged Teal						
Canvasback						
Redhead						
Ring-necked Duck						
Lesser Scaup * DO						
Bufflehead * DO						
Common Goldeneye						
Hooded Merganser						
Common Merganser						
Red-breasted Merganser						
Ruddy Duck						
Osprey * T						
Bald Eagle * T						
Northern Harrier * SC						
Sharp-shinned Hawk						
Cooper's Hawk * SC	5-3			#		
Northern Goshawk * SC						
Red-shouldered Hawk * T						
Broad-winged Hawk						
Red-tailed Hawk	5-26					0P
American Kestrel						
Merlin * T						

## Patches and T-shirts

Do you want to show off your involvement with the Atlas? Do you (or someone you know) collect patches or T-shirts? Well then, you're in luck! Michigan Breeding Bird Atlas II is proud to announce its decal, patch, and T-shirt.

The static-cling window decal (\$2) is 3" square and shows the MBBA II logo in color. This is the same logo that appears on all Atlas correspondence but in an easily transportable form. Stick it in your car window and make other motorists envious about how you spend your free time, outside with the birds. Stick it in your office and make your co-workers even more jealous.

The 3" round patch (\$5) features a wading

Black-necked Stilt, with pale blue sky, dark blue water, "Michigan Breeding Bird Atlas II" along the top in green and the dates of the Atlas in white at the bottom. Black-necked Stilts were not known to breed in Michigan before this Atlas effort. This patch commemorates two nests confirmed in Monroe County in 2003.

The T-shirt (\$15) is a cheerful yellow with the full-color MBBA II logo on the front and the logos of the major sponsors on the back. We have sizes to fit most adults, from S to XXL.

We also have a few patches from the first Atlas project (also \$5). The 4 ½"-wide oval patch features a brown nest with three gray and white Loggerhead Shrike

nestlings. The background is white, the wording is blue.

These items won't be re-ordered, so when we run out, they're gone. Don't delay!



## Contributions Needed

Many of our readers are donating significant amounts of time to the Atlas, and this is greatly appreciated. We couldn't do it without you. However, even with volunteer help, there are significant financial costs for the project. Please consider helping to fund the efforts of your Atlas. We are submitting grant applications to various community foundations, and part of what they look at is what other support we receive. Donations from individuals, in any amount, indicate community involvement and support and make our grant requests more attractive.

Why do we need funding? Our office costs include the entry of all the data reported by volunteers and staff, all the forms, maps, and handbooks mailed out to participants, and time spent answering questions by phone or e-mail. Training sessions are organized and held in various areas around the state. We hire supplemental field staff, sending them to areas that volunteers haven't covered. These last two years of data-gathering are crucial to the success of the whole project. If

our data are not complete enough, our final maps will be less useful.

If you donate to the Atlas, we'll send you a thank-you gift. (Please let us know your T-shirt size, if you donate at an appropriate level.) More importantly, the birds will benefit, and the final publication will be that much better.



### Sponsorship Levels

Eastern Bluebird – up to \$35: static-cling window decal

Northern Cardinal – \$35-\$99: patch and window decal

Wood Duck – \$100-\$299: name listed on donor page in book, T-shirt, patch, and window decal

Kirtland's Warbler – \$300-\$499: name listed on sponsored species page and on donor page, T-shirt, patch, and window decal

Common Loon – \$500-\$1000: 8x10" photo of the sponsored bird, name listed on sponsored species page and on donor page, T-shirt, patch, and window decal

Bald Eagle – more than \$1000: auto-graphed copy of the publication, 8x10" photo of the sponsored bird, name listed on sponsored species page and on donor page, T-shirt, patch, and window decal

# All Eyes on the Long-eared Owl

by Caleb Putnam, Coordinator, Michigan Important Bird Areas Program

The Long-eared Owl may be the most difficult breeding bird in Michigan to find. Its secretive habits and cryptic plumage undoubtedly limit the number of annual observations in Michigan, as shown by the paucity of observations during the first breeding bird atlas. As a result, most authors register the species as “rare” in our state, and it is currently listed as threatened on the Michigan Endangered Species List. But because at-lasing and other common sampling methods do a poor job of sampling species which occur in localized habitats, this designation may not reflect the bird’s actual abundance in our state. Indeed, many suspect the species is actually more common than reports would indicate (e.g., Evers 1991).

A recent study from Minnesota (Hertzel and Hertzel 2000) reached this same conclusion. Targeted searches found that the species is actually “common” in appropriate habitats in Minnesota’s southern third. Given the lack of coordinated searches in Michigan and the similarity of habitats between the two states, we have reason to suspect this may apply to Michigan as well. And although not always on the radar screen of most birders, developing a search image for Long-eared habitat is easier than you think. Further information on the distribution and abundance of this species in Michigan is highly desirable; it will help land managers better understand the species’ actual status and abundance in the state and to assess its conservation needs more accurately.

## Developing a Search Image

Michigan’s Long-eared Owls inhabit *dense thickets near open habitats* supporting a high abundance of Meadow Voles and other mammalian prey. This owl apparently forages in the same habitats as the

Short-eared Owl and Northern Harrier, and the presence of these species suggests that one should check any nearby thickets closely. Foraging Long-eareds patrol low over large, grassy old fields and marshes, or occasionally in open conifer forests. But unlike the Short-eared, they are strictly nocturnal and rarely, if ever, seen foraging before dark. More importantly, the Long-eared never roosts in the open, instead retreating to the *densest available cover* adjacent to its open foraging areas.

South of the Muskegon to Bay City “tension zone” (i.e., the transition from southern deciduous to northern hardwoods/boreal forest), preferred roosting habitats include 20’ to 50’ tall plantations of Scotch Pine, Red Pine, or White Pine. The best plantations are sufficiently large and dense that they appear opaque when viewed from the outside. They may lack a significant understory. Other roosts, such as White Pine, may be impenetrable except for crawling space. Eastern redcedar and spruce thickets, especially those adjacent to large marshes and on sloping land, also are utilized. Rarely, deciduous thickets such as hawthorn are used. In all cases, owls are roosting in the densest available thicket within a short distance of suitable foraging habitat.

North of the tension zone, little specific information is available. However, the species has been recorded in April in young, upland jack pine plantings near El Dorado (Crawford County) and at least two summer nesting records from nearby jack pine forests are known. In this region, the species may forage in grassy clear cuts created for Kirtland’s Warbler management and roost and nest in nearby older stands. Upper Peninsula observations of singing males in Mackinac County have been made in tall balsam fir



An active Long-eared Owl winter roost and nesting site. Western Lower Michigan. © Caleb Putnam 2006.

forests adjoining wet open fields (pers. obs./MNFI data), and it is possible that the use of open conifer forests (e.g., Bull et al. 1983) is more widespread in northern Michigan than in the south. This could account for the low number of northerly winter and summer records, since finding these owls in widespread habitats is presumably more difficult than finding them in discrete, localized patches (e.g., pine plantations).

## Finding Long-eareds

Craighead and Craighead (1956) reported that regular winter roosts (which can involve up to 15 birds) were often used as nesting sites at the end of the winter. All but two of the birds present would depart sometime in March, leaving behind only the breeding pair. Thus, atlasers should begin targeted searches as early as late November, when most winter roosts are already occupied.

Daytime searching with 2 or more observers is the easiest way to locate roosting birds. Walk systematically through the thicket, leaving no corner untouched. Pay close attention to the very densest patches, as these are clearly sought by the birds. Owls may flush from a distance of

## *All Eyes on the Long-eared Owl, cont.*

100 feet or more, flying away from the searchers. Have one person stand back and watch while the other pushes forward through the thicket. Listen for the movement of branches—this is often the only audible clue that a bird has flushed.

Occasionally, roosting birds, especially those in impenetrable thickets, may not budge until you're directly underneath them. Watch close to the trunk for their crow-sized apparitions, and look closely. More than once I've walked directly underneath a roosting pair and missed them! Roosting birds are often found at a height of 10 to 25 feet.

As with most owls, active roosts will produce some amount of whitewash and pellets on the underlying substrate. But remember that time spent looking at the ground means an increased risk of missing a flushing bird overhead, so I always recommend at least one complete walk-through of the roost before concentrating on the ground.

Starting in mid-March, all known winter roosts should be monitored for breeding behavior. Courtship starts by mid-March in lower Michigan (early to mid-April in Mackinac County), and nesting often begins by April 10 (late April or early May in the Upper Peninsula). Shortly after sunset, usually during twilight, the male will begin calling. Single, high-pitched "hoo" notes are given at 2-4 second intervals for up to 5-10 minute periods. Calling may be strongest before midnight. The female often answers with higher-pitched, cat-like "mew" notes, and the male may respond with single in-flight wing-claps given above the nest site. It is reported that Long-eared Owl "hoo" notes can be heard from a distance of one km or more on calm nights, but in my

experience this note is often inaudible from more than a few hundred feet. Additionally, nocturnal broadcast surveys seem to have little success with this species unless birds are very close (pers. obs./MNFI).

### **Artificial Nest Platforms**

Long-eared Owls do not build their own nests, instead occupying deserted mid-size platforms of other species, such as American Crows and Cooper's Hawks. Given the limited availability of high-quality platforms in many preferred roosts, it is possible that the species is nest-site limited in Michigan. Studies in England (Garner 1982, Glue 1977) have found that the species will nest in willow baskets lined with a variety of sticks and placed 15 feet high in known roosts, and I am currently experimenting with this method in lower Michigan. Anyone interested in erecting baskets should contact the Kalamazoo Nature Center Research Department for more information.

### **Reporting Long-eared Owls**

Finding Long-eared Owls is one of the more rewarding experiences in birding. But, given the sensitive nature of this species, it is wise to avoid flushing birds from their daytime roosts as much as possible. Visits should be spaced at least one week apart, as desertion becomes likely the more often you visit. The species is most sensitive late in courtship and early in nesting (during early to mid-April in the Lower Peninsula), so once a suspected nesting pair is found, *avoid nighttime visits entirely* to avoid disturbing courtship behavior. Please be especially cautious about disclosing roosts to birding listservs and other public venues, as disturbance of the roost can quickly become a problem.

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Artificial nest basket used to supplement available crow platforms in a southern Michigan Long-eared Owl roost.  
© Caleb Putnam 2006.

## Grassland Bird Observations Needed by MNFI

by Julie Gibson, Michigan Natural Features Inventory

Michigan Natural Features Inventory (MNFI) is a non-regulatory agency which is part of the MSU Extension Program. Teams of scientists with expertise in botany, zoology, aquatic ecology, and ecology conduct surveys throughout the state, mapping locations of several rare and declining plants, animals, and natural ecosystems. We provide information, training, and education to help conservation organizations, agencies, and units of government make land-use decisions.

Among the many projects MNFI is currently conducting is a three-year, state-wide survey of grassland birds. This exciting project will supplement the Michi-

gan Breeding Bird Atlas II, will help shed light on habitat use by this suite of species, and will promote an overall increase in awareness of grassland bird issues in Michigan. We encourage you to be on the lookout for breeding grassland birds, such as Grasshopper Sparrow and the rare Henslow's Sparrow, and to take detailed notes on their locations, which you can include on the Rare Bird Observation Form, found at:

<[www.michigan.gov/documents/rare\\_bird\\_form\\_119718\\_7.pdf](http://www.michigan.gov/documents/rare_bird_form_119718_7.pdf)>.

It is important that we document the presence of these birds, not only to increase

our knowledge of this suite of species, but also to supplement the MNFI database of protected species. This information gets put to good use. For example, when permit applications are submitted to the DNR or DEQ to fill a wetland or develop an area, the MNFI database is queried for the presence of any nearby protected species and natural communities. Recommendations are based on the presence of these occurrences. Please contact Julie Gibson <[gibsonjm@michigan.gov](mailto:gibsonjm@michigan.gov)> for further information.

## Join the Breeding Bird Survey

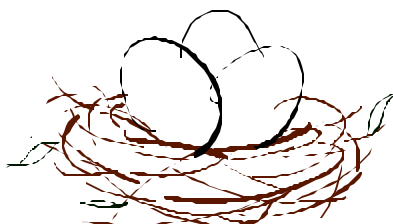
Michigan has a number of federal Breeding Bird Survey routes not currently receiving coverage. If qualified observers, able to identify species by sight and sound, run these routes each year, Michigan will have better data on long-term population trends for many species.

There is a prescribed methodology, but it is not difficult and requires only one morning per year. Many surveyors take an additional morning to scout the route a day or two ahead of time to make sure bridges are still in place and that they can identify everything that's singing. BBS brochures and training CDs are available.

For more information, call or email Ray Adams at (269) 381-9738, ext. 20, or [radams@naturecenter.org](mailto:radams@naturecenter.org). To learn more about the federal Breeding Bird Survey program, visit <[www.pwrc.usgs.gov/bbs/index.html](http://www.pwrc.usgs.gov/bbs/index.html)>.

### Available Michigan Breeding Bird Survey Routes

Route #	Route Name	Counties
1	Ontonagon	Ontonagon
2	Bergland	Gogebic, Ontonagon
5	Ned Lake	Baraga, Iron
6	Herman	Baraga
7	Crystal Falls	Iron
10	Ishpeming	Marquette
11	Brocky Lake	Marquette
44	Brush Creek	Montmorency, Otsego
50	North Bradley	Bay, Midland
51	Ola	Gratiot, Midland
60	Beaver Lake	Alcona, Alpena, Oscoda
64	Owendale	Huron, Sanilac
71	Tyre	Sanilac
162	Herron	Alcona, Alpena
168	Hartland	Livingston, Oakland



## ***MBBA Coverage to Date—A Call to Action!***

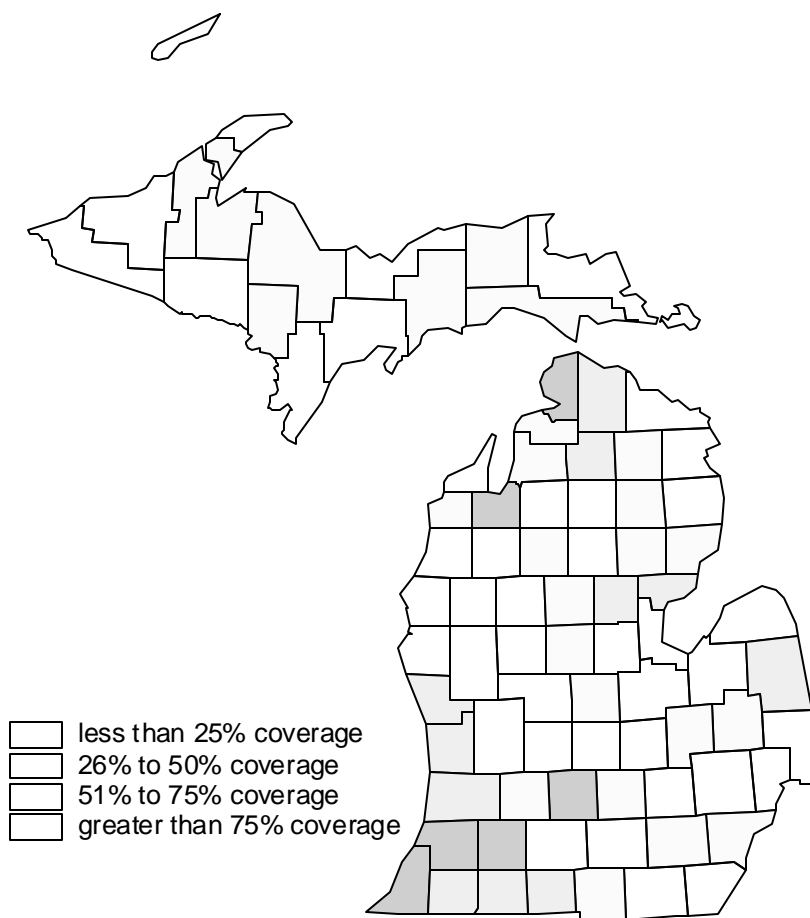
MBBA II has been scheduled for six years of fieldwork to make it comparable to the first Atlas. While we have received observations from over 3,100 blocks, we have completed coverage in only around 500 of 1,700 priority blocks. In order to finish fieldwork in the next two years, we need more of you to focus your survey activity in previously un- or under-surveyed priority blocks. The map below indicates

levels of priority block coverage for each county during the first four years, based on the number of priority blocks with 50 or more species. Although in most of the state we would expect to find more than 50 breeding species in a block, in some areas, such as southeast Michigan, the blocks may contain fewer breeding species. We do have additional coverage in secondary and non-priority blocks, but,

while useful, this does not make up for lack of priority block coverage.

The challenge is clear. We need more surveyors and we need each surveyor to cover more priority blocks, by both completing coverage in those priority blocks that already have been started and visiting new priority blocks.

Michigan Breeding Bird Atlas II  
Priority Block Coverage as of March 2006



Kalamazoo Nature Center  
Mark E. Miller 2006



# The Barn Owl in Michigan

by Caleb Putnam, Coordinator, Michigan Important Bird Areas Program

The Barn Owl has the dubious distinction of being one of only a handful of breeding birds which have probably been extirpated from the state of Michigan. Since the last documented nest in Monroe County in 1983, the species has, to an extent, fallen off the radar screen. Of the eight birds on the Michigan endangered species list categorized as endangered, the Barn Owl is one currently receiving little or no conservation attention.

Still, the species has been reported in the state at least four times since 1983 (Michigan Bird Records Committee data), and it is possibly still a very rare breeder in our state. State conservation organizations both private and public are expressing renewed interest in this species, and the Breeding Bird Atlas is currently seeking observations of the species in Michigan. Atlas staff are interested in following up on any reports from recent years.

## Michigan History

Originally very rare in Michigan, the Barn Owl expanded its range in our state from the south following the large-scale clearing of forests for agricultural pasture in the late 1800s and early 1900s. The species exploded between 1920 and 1940, with records throughout the southern Lower Peninsula as far north as Bay, Midland, and Montcalm counties (Lerg 1984). However, starting in the late 1940s the species began to decline precipitously, concurrent with large scale conversion of pasture and hay lands to row crops. The loss of grasses, and thus Meadow Voles and other microtine rodents (the dominant prey items), is thought to be a major factor contributing to this decline.

The last stronghold of the species was in coastal Monroe County in the 1970s, where nests were present until the early 1980s. Since then, there have been numerous unconfirmed reports but only four accepted records of single birds: Grand Traverse County (3 Aug 1990), Manistee County (16 Mar 1995-11 May 1996), Cass County (3 Apr 1994), and Chippewa

County (20 Feb 2000) (Michigan Bird Records Committee data).

## Where to look in Michigan

Like Greater Prairie-Chickens and many other declining grassland species, Barn Owls are area sensitive. They depend upon the maintenance of large tracts of grassland or wet meadow at the landscape level to maintain a population. The destruction and fragmentation of Michigan's pastures and meadowlands certainly explains in large part the decline experienced here. If it still persists, the Barn Owl is most likely to be found in areas where the largest amount of unfragmented grassland and wet meadow habitat still exist.

GIS analysis by Christopher Hoving of the Michigan DNR has shown that the best remaining grassland tracts exist in the following primary areas: a band running westward from Saginaw Bay to Lake Michigan, the Thumb, and isolated parts of the three lower tiers of counties (Fig. 1).

Grassland areas in the northern Lower Peninsula and eastern Upper Peninsula are considered less likely to host Barn Owls because they are not within the species' historical range, which extended north to approximately the Bay-Midland tension zone (Lerg 1984). It may come as a surprise that areas as far north as Clare and Gladwin counties are on our Barn Owl radar screen. We believe the habitat conditions are appropriate, and there is at least one very recent, unconfirmed summer report from this area.

Within the three southern tiers of counties, the best remaining patches are in Cass County, southern Barry County, and on the Jackson/Washtenaw/Lenawee County boundary. Northern Allegan County also has a sizeable patch. Very interesting is a large aggregation in the Montcalm/Mecosta/Isabella complex, an underbirded area.

Lastly, it is important to point out that the

locations in Figure 1 are not the only possible locations for Barn Owl, as grasslands smaller than 200 acres are present in many other areas but do not show up on this map.

## Current Efforts to Monitor and Manage

The first priority in any Barn Owl project is to determine whether the species is present within our borders, and if so, where and when. We plan to publish articles in agricultural newsletters and other publications soliciting reports from those who live in appropriate habitats and are likely to recognize the bird.

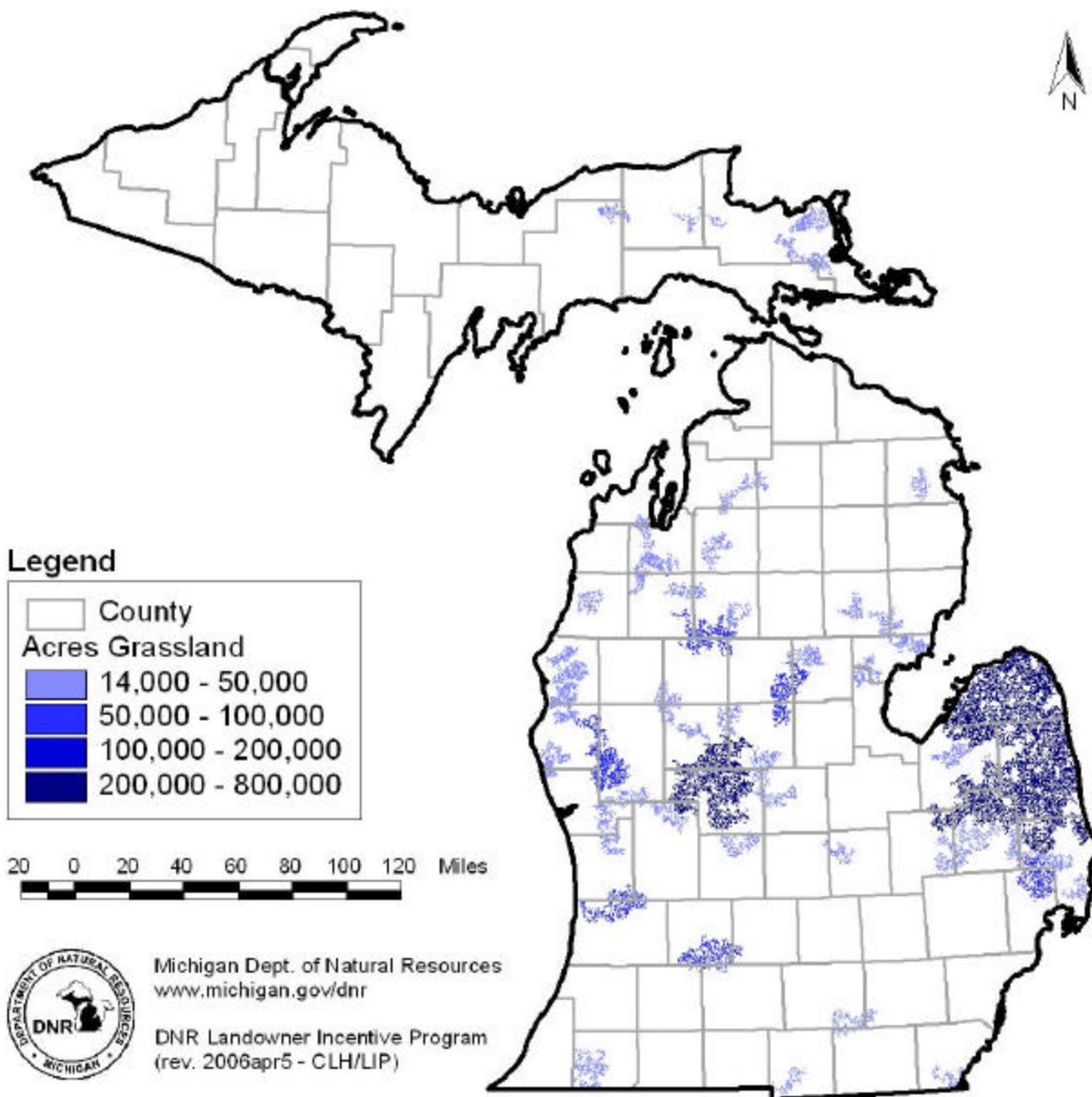
But the efficacy of this method has been questioned, and given the difficulty of detecting the species, those who have birds on their property may not necessarily know it. A useful second stage of this project could involve erecting nest boxes in appropriate habitats and monitoring them regularly for breeding evidence. This has not yet been initiated, but landowners wishing to do this on their own are encouraged to contact the Kalamazoo Nature Center Research Department for more information.

Erecting nest boxes would minimize any nest-site limitation the species is experiencing in Michigan. This phenomenon is well documented in other states, where Barn Owls are known to be opportunistic in their use of human-made nest structures (e.g., boxes, silos, barns, haystacks, etc.) in the absence of appropriate natural cavities. The species is known to forage up to 2-3 kilometers from the nest site (Colvin 1984), and to roost even further away, so even a few boxes in appropriate landscapes could benefit the species.

## Summary

As you are canvassing your local Atlas blocks and birding patches, keep in mind the possibility of Barn Owls in any remnant grassland or wet meadow habitats. If you live near one of the grassland patches shown in Fig. 1, consider visiting

## ***The Barn Owl in Michigan, cont.***



the area at night in late May or June to play tapes or just listen for Barn Owls at appropriate roost sites. Or consider erecting a Barn Owl box. It is our hope that this state-endangered bird can be rediscovered and brought back to its former status as a regular breeder within our state.

### **References**

Colvin, B. A. 1984. Barn Owl foraging behavior and secondary poisoning hazard from rodenticide use on famrs. Ph.D. diss., Bowling Green State Univ., Bowling Green, OH.

Lerg, J. 1984. Status of the Common Barn Owl in Michigan. Jack-Pine Warbler 62 (2):39-48.

Figure 1. Landscapes in Michigan with extensive grasslands. The colored areas are areas with contiguous grasslands, including emergent wetlands, as derived from 2000 classified satellite data. Courtesy Michigan DNR.



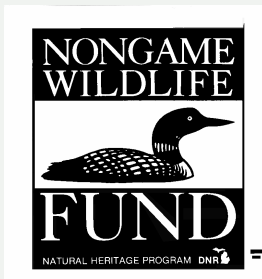
### ***Documenting Michigan's Birds***

Michigan Breeding Bird Atlas II is a multi-year (fieldwork 2002-2007), statewide project coordinated by Kalamazoo Nature Center, with major financial support from Michigan Department of Natural Resources, to resurvey the state's breeding birds. The Atlas documents nesting distribution, abundance and habitat use of Michigan breeding bird species, especially rare, threatened and endangered species.

The second MBBA will provide an opportunity to identify changes that may have occurred since the 1980s. The final publications will create awareness of birds and bird conservation among Michigan citizens, and the data will strengthen the case for government officials, land owners, land managers and other decision makers throughout Michigan to take appropriate actions to protect and maintain healthy, sustainable breeding bird populations in the state.

For more information about the Atlas or to participate, please contact the Research Department at Kalamazoo Nature Center.

### **Major Funding Provided by:**



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